

Abstract

A system and method are provided to delay closure of an electrical circuit of a battery-powered electrical device, intended to operate remotely in an environment in which the pH value changes from one value to another. Two electrical contacts of an electrical circuit are separated by an insulator that holds the circuit open until the device is exposed to an environment having a predetermined pH value. Exposure of the insulator to an environment having that pH value causes the insulator to dissolve and the circuit to close, energizing the device. Alternatively, A Hall effect transistor or a reed switch may be used as the switch. It is held open by the presence of a magnetic field held in place by material that is dissolvable at a predetermined pH level. When a region having that pH level is reached, the material dissolves and the circuit closes.